


Permitting Wastewater Discharges in Montana



Melee K. Valett, B.S., M.S.
Permitting & Compliance Division
Montana Department of
Environmental Quality

mvalett@mt.gov



The
**National Pollutant Discharge
Elimination System (NPDES)**
was enacted in **1972.**



What is a Permit?

► It is a license issued by the government to a person granting permission to do something that would be illegal in the absence of the permit.

(75-5-605, MCA – It is unlawful to...)

► It has effluent limits to protect water quality & beneficial uses;

► It most likely requires monitoring; and

► There is no given right to a permit; it is revocable for cause.

Discharge Permits Issued by the State of Montana

► **Surface Water Discharges - MPDES**

- Industrial Systems;
- Domestic Wastewater Treatment Facilities;
- Storm Water Discharges from construction, industrial, mining/oil and gas, and some municipal activities;
- Concentrated Animal Feeding Operations

► **Ground Water Discharges - MGWPCS**

- Industrial Systems;
- Domestic Wastewater Treatment Facilities;

► **310/318 (USACE, MDEQ, & MFWP Joint Application).**



DEPARTMENT OF ENVIRONMENTAL QUALITY

What are you looking for?

[DEQ Home](#)

[Divisions](#)

[Public Interest](#)

[Online Services](#)

[Contacts](#)

[Search](#)

[Water Quality Info](#)

[Advisory Councils](#)
[Laws and Rules](#)
[Subject/Contact Search](#)
[Ground Water Who's Who](#)
[Water Quality Circulars](#)
[Water Links of Interest](#)

[Nonpoint Data Management](#)

[Clean Water Act Information Center \(CWAIC\)](#)
[Quality Assurance](#)
[STORET](#)
[Water Quality Library](#)

[Water/Wastewater Info](#)

[Public Drinking Water](#)
[Monitoring Schedules/Results](#)
[Engineering Plan Review](#)
[Operator Certification](#)
[Financing Drinking Water Projects](#)
[2009 Intended Use Plan](#)
[Financing Wastewater Projects](#)
[2009 Intended Use Plan](#)
[Source Water Protection](#)
[Source Water Assessments](#)
[Subdivisions](#)
[Application Form](#)

[Permitting Info](#)

[Storm Water](#)
[Concentrated Animal Feeding Operations \(CAFO\)](#)
[MPDES Surface water discharge permits](#)
[MGWPCS Groundwater discharge permits](#)
[308/318 Certifications](#)
[401 Certifications](#)
[Nondegradation](#)

[Water Quality](#)

[Nonpoint Source Water Pollution](#)
[319 Grant Info](#)
[Total Maximum Daily Loads \(TMDLs\)](#)
[Completion Schedule](#)
[TMDLs in Progress](#)
[Standards & Classifications](#)
[Surface Water Monitoring](#)
[Water Quality Publications](#)
[Wetland Conservation](#)



WHAT'S NEW

- [☞ Clear Choices: Storm Water Solutions for Montana Conference](#)
- [☞ Montana DEQ Formal TMDL Public Review and Stakeholder Notification Procedure](#)



<http://deq.mt.gov/wqinfo/index.asp>

Who needs a permit?

- ▶ Any facility that discharges pollutants from a point source into waters of the state. In MT this includes surface waters and ground waters, alike.
- ▶ New sources will need to comply with the state Nondegradation Rules at ARM 17.30.700, *et seq.*



Types of Wastewater

► **Process Wastewater**

- This can be very specifically defined by federal Effluent Limitation Guidelines found at 40 CFR Subchapter N.

► **Non-contact Cooling Water**

► **Boiler Blowdown, RO Reject, Regenerate**

► **Storm Water from Various Activities**

- ELG-driven
- Non-ELG

► **Domestic Wastewater**

Effluent Limitations for Surface Water Discharges

- ▶ **Technology-based Effluent Limits (TBELs);**
- ▶ **Water Quality-based Effluent Limits (WQBELs);**
- ▶ **Total Maximum Daily Load-developed
Waste Load Allocation**



Technology-based Effluent Limits (TBELs)

"Minimum Treatment Requirements" under the MT-WQA

► **Federal Effluent Limitation Guidelines (ELG) –**

"Industrial Discharges"

- Best Conventional Technology (BCT)
- Best Available Technology (BAT)
- New Source Performance Standards (NSPS)

"Zero Discharge"

- Best Professional Judgment (PBJ) CWA 402(a)(1)

"Case-by-Case Basis"

► **National Secondary Treatment Standards (NSS) –**

"Publicly-owned Treatment Works (POTWs)"

► **Indirect (Industrial) Discharges to POTWs**

- Pretreatment Standards for Existing Sources (PSES)
- Pretreatment Standards for New Sources (PSNS)

- 429.153 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT). [Reserved]
- 429.154 New source performance standards (NSPS).
- 429.155 Pretreatment standards for existing sources (PSES).
- 429.156 Pretreatment standards for new sources (PSNS).

Subpart O—Wood Furniture and Fixture Production Without Water Wash Spray Booth(s) or Without Laundry Facilities Subcategory

- 429.160 Applicability; description of the wood furniture and fixture production without water wash spray booth(s) or without laundry facilities subcategory.
- 429.161 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 429.162 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
- 429.163 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).
- 429.164 New source performance standards (NSPS).
- 429.165 Pretreatment standards for existing sources (PSES).
- 429.166 Pretreatment standards for new sources (PSNS).

Subpart P—Wood Furniture and Fixture Production With Water Wash Spray Booth(s) or With Laundry Facilities Subcategory

- 429.170 Applicability; description of the wood furniture and fixture production with water wash spray booth(s) or with laundry facilities subcategory.
- 429.171 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).
- 429.172 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT). [Reserved]
- 429.173 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

- 429.174 New source performance standards (NSPS).
- 429.175 Pretreatment standards for existing sources (PSES).
- 429.176 Pretreatment standards for new sources (PSNS).

AUTHORITY: Secs. 301, 304(b), (c), (e), and (g), 306(b) and (c), 307(a)(b) and (c) and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended by the Clean Water Act of 1977) (the "Act"); 33 U.S.C. 1311, 1314(b), (c), (e), and (g), 1316(b) and (c), 1317(b) and (c), and 1361; 86 Stat. 815, Pub. L. 92-500; 91 Stat. 1567, Pub. L. 95-217.

SOURCE: 46 FR 8285, Jan. 26, 1981, unless otherwise noted.

GENERAL PROVISIONS

§ 429.10 Applicability.

This part applies to any timber products processing operation, and any plant producing insulation board with wood as the major raw material, which discharges or may discharge process wastewater pollutants to the waters of the United States, or which introduces or may introduce process wastewater pollutants into a publicly owned treatment works.

§ 429.11 General definitions.

In addition to the definitions set forth in 40 CFR part 401, the following definitions apply to this part:

(a) The term "hydraulic barking" means a wood processing operation that removes bark from wood by the use of water under a pressure of 6.8 atm (100 psia) or greater.

(b) The terms "cubic feet" or "cubic meters" of production in subpart A means the cubic feet or cubic meters of logs from which bark is removed.

(c) The term "process wastewater" specifically excludes non-contact cooling water, material storage yard runoff (either raw material or processed wood storage), boiler blowdown, and wastewater from washout of thermal oxidizers or catalytic oxidizers, wastewater from biofilters, or wastewater from wet electrostatic precipitators used upstream of thermal oxidizers or catalytic oxidizers installed by facilities covered by subparts B, C, D or M to comply with the national emissions standards for hazardous air pollutants (NESHAP) for plywood and composite

Environmental Protection Agency

wood products (PCWP) facilities (40 CFR part 63, subpart DDDD). For the dry process hardboard, veneer, finishing, particleboard, and sawmills and planing mills subcategories, fire control water is excluded from the definition.

(d) The term "gross production of fiberboard products" means the air dry weight of hardboard or insulation board following formation of the mat and prior to trimming and finishing operations.

(e) The term "hardboard" means a panel manufactured from interfelted ligno-cellulosic fibers consolidated under heat and pressure to a density of 0.5 g/cu cm (31 lb/cu ft) or greater.

(f) The term "insulation board" means a panel manufactured from interfelted ligno-cellulosic fibers consolidated to a density of less than 0.5 g/cu cm (less than 31 lb/cu ft).

(g) The term "smooth-one-side (S1S) hardboard" means hardboard which is produced by the wet-matting, wet-pressing process.

(h) The term "smooth-two-sides (S2S) hardboard" means hardboard which is produced by the wet-matting, dry-pressing process.

(i) The term "debris" means woody material such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 cm (1.0 in) diameter round opening and is present in the discharge from a wet storage facility.

(j) For the subcategories for which numerical limitations are given, the daily maximum limitation is a value that should not be exceeded by any one effluent measurement. The 30-day limitation is a value that should not be exceeded by the average of daily measurements taken during any 30-day period.

[46 FR 8285, Jan. 26, 1981, as amended at 46 FR 57287, Nov. 23, 1981; 69 FR 46045, July 30, 2004]

§ 429.12 Monitoring requirements. [Reserved]

Subpart A—Barking Subcategory

§ 429.20 Applicability; description of the barking subcategory.

This subpart applies to discharges to waters of the United States and to the

introduction of process wastewater pollutants into publicly owned treatment works from the barking of logs by plants in SIC major group 24, and by plants producing insulation board (SIC group 2661).

§ 429.21 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT):

(a) The following limitations apply to all mechanical barking installations: There shall be no discharge of process wastewater pollutants into navigable waters.

(b) The following limitations constitute the maximum permissible discharge for hydraulic barking installations:

SUBPART A

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Metric units (kilograms per cubic meter of production)	
BOD ₅	1.5	0.5
TSS	6.9	2.3
pH	(¹)	(¹)
	English units (pounds per cubic foot of production)	
BOD ₅	0.09	0.03
TSS	0.431	0.144
pH	(¹)	(¹)

¹ Within the range 6.0 to 9.0 at all times.

Water Quality-based Effluent Limitations (WQBELs)

Water Quality Standard
(numeric or narrative)

Translator Mechanism

Wasteload Allocation

Permit Limitation
(Daily Maximum, Average Monthly)

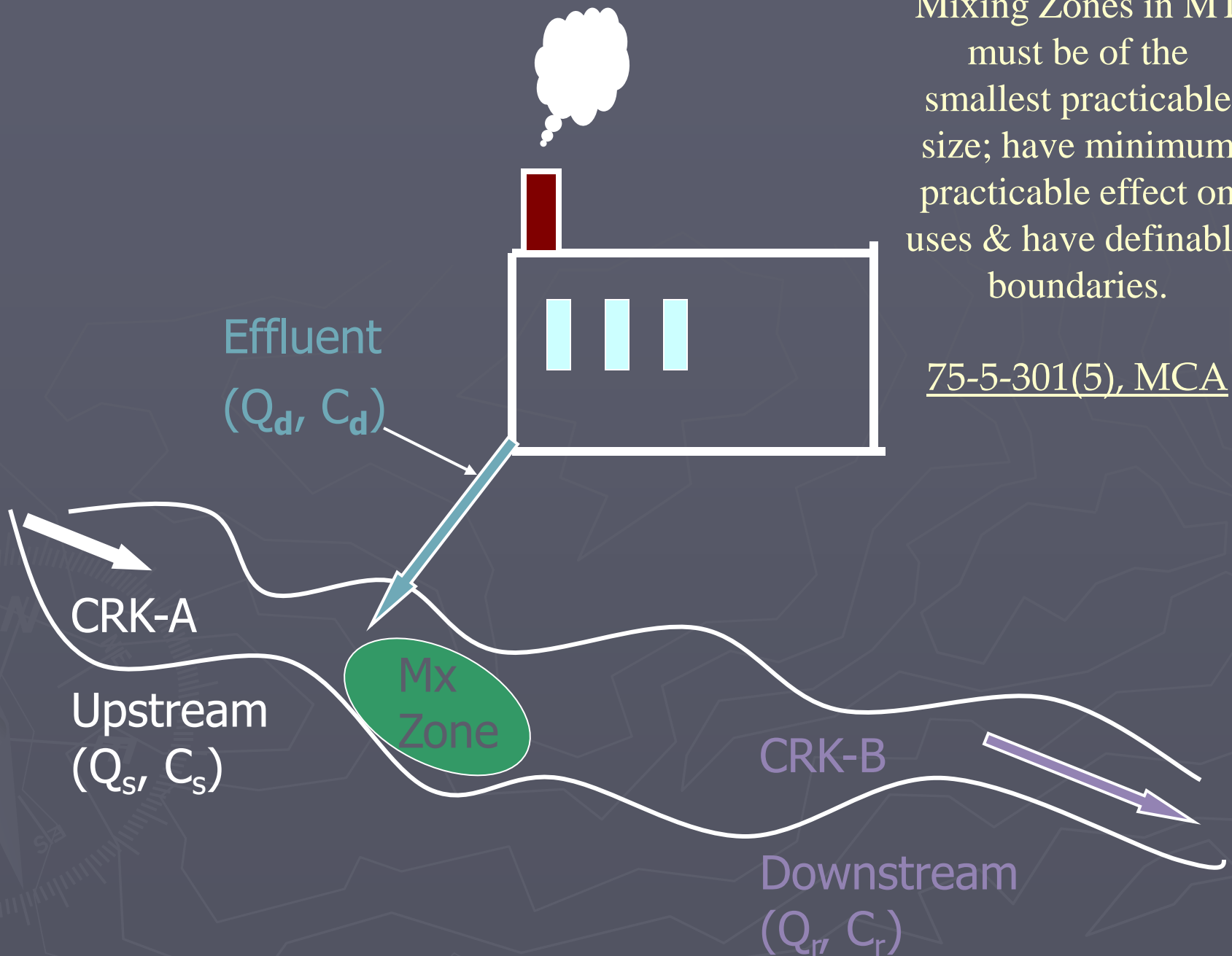
Narrative Water Quality Standard: *State waters must be free from substances that will create concentrations which are toxic or harmful to human, plant or aquatic life, ARM 17.30.637(1)(d).*

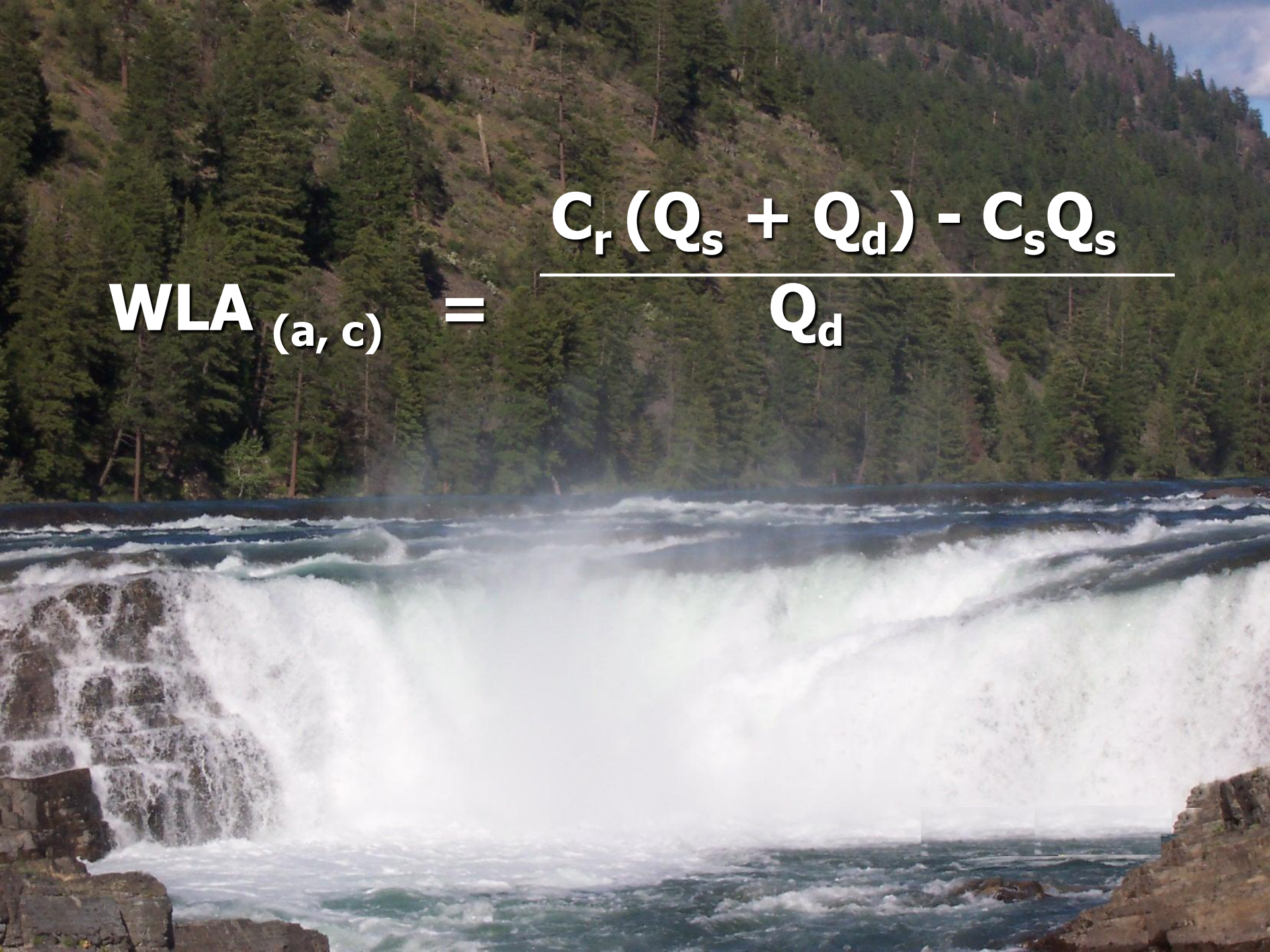


- ▶ **Permit Limitation:** *There shall be no acute toxicity in the effluent.*
- ▶ **Required Monitoring:** Quarterly Whole Effluent Toxicity (WET) Testing.
- ▶ If toxicity is confirmed, the Permittee must conduct a Toxics Identification Evaluation/Toxics Reduction Evaluation investigation.

Mixing Zones in MT
must be of the
smallest practicable
size; have minimum
practicable effect on
uses & have definable
boundaries.

75-5-301(5), MCA





$$WLA_{(a, c)} = \frac{C_r (Q_s + Q_d) - C_s Q_s}{Q_d}$$

Under the B-1 Classification

[ARM 17.30.623(e)]:

A 1°F maximum increase above naturally occurring water temperature is allowed within the range of 32°F to 66°F; within the naturally occurring range of 66°F to 66.5°F, no discharge is allowed which will cause the water temperature to exceed 67°F; and where the naturally occurring water temperature is 66.5°F or greater, the maximum allowable increase in water temperature is 0.5°F. A 2°F per hour maximum decrease below naturally occurring water temperature is allowed when the water temperature is above 55°F. A 2°F maximum decrease below naturally occurring water temperature is allowed within the range of 55°F to 32°F.

 <div style="display: inline-block; vertical-align: middle;"> <p>Montana Department of</p> <p>ENVIRONMENTAL QUALITY</p> </div>			Agency Use		
			Permit No.: _____		
			Date Rec'd _____		
			Amt Rec'd _____		
			Check No. _____		
			Rec'd By _____		
FORM 1			GENERAL INFORMATION <i>(See Instruction Sheet)</i>		
Section A - Montana Pollution Discharge Elimination System (MPDES)					
SPECIFIC QUESTIONS		MARK 'X'		SPECIFIC QUESTIONS	
		YES	NO	FORM ATTACHED	
1. Is this facility a publicly owned treatment works which results in a discharge to state surface waters or waters of the U.S.? (FORM 2A)					
3. Is this a facility which currently results in a discharge of industrial wastewater to state surface water other than those described in 1 or 2 above? (FORM 3C)					
5. Does this facility discharge only non-process wastewater, not subject to federal effluent guidelines or new source performance standards to state surface waters? (FORM 5E)					
2. Is this facility (either existing or proposed) a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)					
4. Is this a proposed facility (other than those described in 1 or 2 above) which will result in a discharge of industrial wastewater to state surface waters? (FORM 4D)					
6. Does this facility dispose of sewage, industrial, or other waste, through land application? (FORM 6A-1)					
Montana Ground Water Pollution Control System (GWPCS)					
7. Does this facility discharge sewage to ground water through infiltration, percolation or other methods of subsurface disposal? (GW-1)					
8. Does this facility discharge industrial waste, or other waste, to ground water through infiltration, percolation, or other methods of subsurface disposal? (GW-2)					
Section B - Facility/Site or Activity Information <i>(See Instruction Sheet)</i>					
Facility Name _____					
Facility Location _____					
City, State, Zip _____					
Telephone Number _____ County: _____					
Township: _____ Range: _____ Section: _____; _____ 1/4 _____ 1/4 _____ 1/4					
Latitude: _____ Longitude: _____					
Is the facility located on Indian lands? <input type="checkbox"/> YES <input type="checkbox"/> NO					
Section C - Facility Contact					
Facility Contact / Title _____					
Mailing Address _____					
City, State, Zip _____					
Telephone Numbers _____					
Section D - Existing or Pending Permits, Certifications, or Approvals					
<input type="checkbox"/> MPDES Permit _____ <input type="checkbox"/> 404 Permit (dredge & fill) _____ <input type="checkbox"/> UIC # _____ <input type="checkbox"/> MGWPCS # _____ <input type="checkbox"/> Plat Approval EQ # _____ <input type="checkbox"/> Other _____					

A scenic view of a river with rapids flowing through a forest of tall evergreen trees under a blue sky with white clouds. The river is in the foreground, with white water rapids. The banks are covered in dense evergreen forest. The sky is blue with scattered white clouds. The text "Any Questions?" is overlaid on the right side of the image.

Any Questions?